

CLAIMS

What I claim is:

- 5 1. A method of fabricating a plurality of micro probes comprising the steps of:
defining the shapes of a plurality of probes as one or more masks;
applying a photoresist to first and second opposing sides of a metal foil;
10 overlaying one each of said masks on opposing first and second sides of
said metal foil;
exposing said photoresist to light passed through each of said masks;
developing said photoresist;
removing a portion of said photoresist to expose a portion of said metal
15 foil; and
applying an etcher to the surface of said metal foil to remove said exposed
portion to produce a plurality of probes.
- 20 2. The method of claim 1 comprising the additional step of chemically polishing
and plating the plurality of probes after the application of the etcher to the surface of
said metal foil.
3. The method of claim 1 wherein said metal foil is composed of a berrillium-
copper alloy.
- 25 4. A micro probe manufactured according to the method of claim 1 said micro
probe comprising:
a probe base having a generally uniform thickness bounded by a plurality
of edges and extending for a substantially straight length in a plane;
30 a probe shaft connected to said probe base said probe shaft of said
generally uniform thickness, bounded by a plurality of edges, and
extending along a curved expanse within said plane;
a probe end connected to said probe shaft said probe end of said generally
uniform thickness, bounded by a plurality of edges, and extending for a
35 substantially straight distance within said plane said straight distance
being approximately parallel to said straight length; and
a scallop running substantially around a periphery comprised of the edges
of said probe base, said probe shaft, and said probe end.
- 40 5. The micro probe of claim 4 wherein said uniform thickness is preferably
between 2 mils and 5 mils..
6. The micro probe of claim 5 wherein said uniform thickness is most preferably
between 3 mils and 4 mils.
- 45 7. The micro probe of claim 6 wherein said scallop further comprises a scallop
base and a scallop tip.
8. The micro probe of claim 7 wherein said scallop base and said scallop tip are
50 separated by a substantially uniformly distance.

9. A probe test head comprising:
 - a first die comprised of first and second opposing planar surfaces said first die further comprising a pattern of first die holes extending through said first die in a direction perpendicular to both of said first and second planar surfaces;
 - a second die comprised of third and forth opposing planar surfaces said second die further comprising a pattern of second die holes corresponding to said pattern of first die holes said second die holes extending through said second die in said direction wherein said third planar surface is arranged in planar contact with said second planar surface such that said second die holes are offset from said first die holes in a substantially uniform direction; and
 - a plurality of probes one each of said probes extending through one of said first die holes and one of said second die holes said probes having a surface finish commensurate with having been formed by etching.
10. The probe test head of claim 9 further comprising two spacing covers one each of said spacing covers inset into said first and second die.
11. The probe test head of claim 9 wherein each of said plurality of probes is substantially uniform in shape when compared to each other one of said plurality of probes.
12. The probe test head of claim 9 wherein the length of each of said plurality of probes is preferably within .002 inches of every other one of said plurality of probes.
13. The probe test head of claim 12 wherein the length of each of said plurality of probes is preferably within .001 inches of every other one of said plurality of probes.
14. The probe test head of claim 13 wherein the length of each of said plurality of probes is preferably within .0005 inches of every other one of said plurality of probes.